



US Army Corps
of Engineers®

Coastal Field Data Collection Program

Integrated Ocean Observing System (IOOS), *an Inter-agency Program*

Issue Successful design, construction, operation, and maintenance of coastal projects require climatological or real-time environmental data. Traditionally the Corps has collected only long-term wave data. However, the requirements of regional sediment management and systems approaches to ecosystem management require observations of many other parameters (climate change, currents, turbidity, salinity, water quality, habitat, etc.). These data are not normally available, nor are data on ambient variation (i.e., natural fluctuations in served turbidity). To expand the spatial and temporal coverage and number of observed variables available, the Corps is participating in the development of the Integrated Ocean Observing System or IOOS, an inter-agency activity under the Joint Subcommittee of Ocean Science and Technology (JSOST) and a recommendation of the President's Ocean Action Plan.

Research Approach The IOOS is developing through integration of existing observations and through expansion to fill gaps. The IOOS is an end-to-end system including observing, modeling, data discovery and on-line delivery, education, and outreach. Federal agencies are supplying a *National Backbone* of observations (i.e., deepwater buoys, wave gauges, tide gauges, stream gauges, etc). Eleven regional associations (shown below) have been established to serve local users through observations and modeling. Implementation of data standards will allow users to easily locate and access IOOS data streams and to develop customized products and displays.

Through this work unit, the USACE is participating in the development of IOOS and insuring that the program is responsive to Corps requirements. Opportunities exist for USACE Districts to participate, and Districts are encouraged to join their local IOOS regional association.



Partners The national IOOS lead is NOAA. There are 18 other agencies including Navy, USGS, NSF, NASA, and DHS, along with the IOOS regional and national associations.

Products A developing rich array of real-time and archived data sets will be available on-line along with readily available tools for data analysis and display. Focus is initially on six variables (water level, ocean temperature, salinity, ocean color, currents, and waves) with many others to follow.

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